

Storm Water Pollution Prevention Plan

For:
PENG RESIDENCE
20825 GARTEL DRIVE
SPC 44-2003

OK - AS SUBMITTED
3/3/08

PROVIDE ONE COPY
ON-SITE AT ALL
TIMES

Prepared for:
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OWNER'S REPRESENTATIVE: CHUNG-HANG "CHRIS" PENG

Project Site Location/Address:
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(909) 896-2663

Contractor's Storm Water Pollution Prevention Manager
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SWPPP Preparation Date:
OCTOBER 3, 2007

Estimated Project Dates:
Start of Construction: 11/1/07 Completion of Construction: 11/1/08

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SWPPP Attachments

Attachment A	Vicinity Map
Attachment B	Water Pollution Control Drawings
Attachment C	BMP Consideration Checklist
Attachment D	Computation Sheet for Determining Runoff Coefficients
Attachment E	Computation Sheet for Determining Run-on Discharges
Attachment F	Notice of Intent (NOI)
Attachment G	Program for Maintenance, Inspection, and Repair of Construction Site BMPs
Attachment H	Storm Water Quality Construction Site Inspection Checklist
Attachment I	Trained Contractor Personnel Log
Attachment J	Subcontractor Notification Letter and Log
Attachment K	Notice of Non-Compliance
Attachment L	SWPPP and Monitoring Program Checklist
Attachment M	Annual Certification of Compliance Form
Attachment N	Other Plans/Permits
Attachment O	Water Pollution Control Cost Breakdown
Attachment P	Notice of Termination (NOT)
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Attachment T.....Discharge Reporting Log

Section 100

SWPPP Certifications and Approval

100.1 SWPPP Certification by Preparer

Project Name: PENG RESIDENCE
20825 GARTEL DRIVE

Project Number: SPC 44-2003

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Danny M. Pierce
Preparer's Signature

FEBRUARY 25, 2008
Date

DANNY M. PIERCE - CIVIL ENGINEER
Preparer's Name and Title

(909) 594-0552
Telephone Number

100.2 Owner Approval and Certification of SWPPP

Owner's (or Authorized Representative)
Approval and Certification of the
Storm Water Pollution Prevention Plan

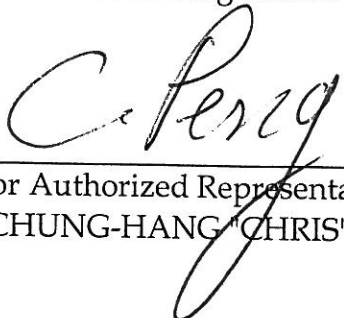
Project Name:

PENG RESIDENCE
20825 GARTEL DRIVE

Project Number:

SPC 44-2003

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."


Owner (or Authorized Representative) Signature
CHUNG-HANG "CHRIS" PENG

Oct 3, 2007

Date

Name and Title

(909) 896-2663

Telephone Number

100.3 Annual Compliance Certification

By July 1 of each year, the Owner shall complete an Annual Certification of Compliance stating compliance with the terms and conditions of the Permit and the SWPPP. The blank Annual Certification of Compliance Form is included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

Section 200

SWPPP Amendments

200.1 SWPPP Amendment Certification and Approval

This SWPPP shall be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4); or
- If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- Annually, prior to the defined rainy season; and
- When deemed necessary by the Owner.

The following items will be included in each amendment:

- Who requested the amendment.
- The location of proposed change.
- The reason for change.
- The original BMP proposed, if any.
- The new BMP proposed.

The amendments for this SWPPP, along with the Owner's Certification and the Owner approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2

SWPPP Amendment No.

Project Name: PENG RESIDENCE
20825 GARTEL DRIVE
Project Number: SPC 44-2003

Preparer Certification of the
Storm Water Pollution Prevention Plan Amendment

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Preparer's Signature

Date

Preparer's Name and Title

Telephone Number

Owner (or Owner's Authorized Representative) Approval of the
Storm Water Pollution Prevention Plan Amendment

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Owner (or Authorized Representative) Signature
CHUNG-HANG "CHRIS" PENG

Date

Name and Title

(909) 896-2663
Telephone Number

200.2 Amendment Log

Project Name: PENG RESIDENCE
20825 GARTEL DRIVE

Project Number: SPC 44-2003

Amendment No.	Date	Brief Description of Amendment	Prepared By

Section 300

Introduction and Project Description

300.1 Introduction and Project Description

The project will develop the 3.39 acre site in the City of Walnut, County of Los Angeles, with 3 single family residential lots with a two story home including a 4 car attached garage. The main project construction features include grading of the entire 3.39 acre site, construction of the homes, reconstruction of Gartel Drive pavement along the property frontage, a private road, driveways, walks, utilities, on-site storm drain system, stormwater detention system and landscaping.

300.2 Unique Site Features

There are no significant site features and no known environmentally sensitive areas, endangered or protected species on the site.

300.3 Construction Site Estimates

The following are estimates of the construction site:

Construction site area	5.56	acres
Percentage impervious area before construction	1	%
Runoff coefficient before construction ⁽¹⁾	0.10	
Percentage impervious area after construction	5.6	%
Runoff coefficient after construction ⁽¹⁾	.14	
Anticipated storm water flow on to the construction site ⁽²⁾	29.15	cfs

⁽¹⁾ Calculations are shown in Attachment D

⁽²⁾ Calculations are shown in Attachment E

300.4 Project Schedule/Water Pollution Control Schedule

Submit annual rainy season implementation schedule by 09/05/2007

Prepare soil stabilization and sediment control implementation plan prior to the rainy season, submit to the Owner/Developer by 09/05/2007

Schedule soil stabilization subcontractor for application of temporary stabilization on disturbed areas and permanent erosion control on areas substantially completed on	10/15/2007
Rainy season begins on	10/15/2007
Start implementation of temporary soil stabilization and sediment control BMPs on	10/25/2007
Continue to implement and maintain temporary BMPs throughout rainy season.	
Estimate Construction Start	11/01/2007
Mobilization of equipment and materials to begin on	11/01/2007
Store temporary soil stabilization and temporary sediment control products beginning on	11/01/2007
Install stabilized construction entrance on	11/01/2007
Complete installation of temporary soil stabilization and sediment control BMPs on	11/15/2007
Site Preparation: Clearing and grubbing on	11/01/2007 to 11/15/2007
Excavation and grading from	11/15/2007 to 02/01/2008
Construction of house to begin on	02/04/2008
Install temporary concrete washout on	02/15/2008
Installation of utilities (power conduits, telephone conduits, water service, on-site storm drain system and sewer service from	03/03/2008 to 07/01/2008
Implement final erosion control of substantially completed areas from	12/03/2007 to 11/01/2008
Begin final paving / construction on	06/16/2008

Continue to apply soil stabilization and sediment controls as needed during construction.	
Schedule subcontractors for application of permanent erosion control on	08/15/2008
Start final stabilization, revegetation and landscaping on	09/08/2008
Submit annual rainy season implementation schedule by	09/08/2008
Prepare soil stabilization and sediment control implementation plan prior to the rainy season, submit to the Owner/Developer by	09/08/2008
Schedule soil stabilization subcontractor for application of temporary stabilization on disturbed areas and permanent erosion control on areas substantially completed on	10/01/2008
Rainy season begins on	10/15/2008
Complete building construction on or before	11/01/2008
Estimate Construction Finish	11/01/2008

300.5 Contact Information/List of Responsible Parties

The Storm Water Pollution Prevention Manager (SWPPM) assigned to this project is:

CHUNG-HANG "CHRIS" PENG

(909) 594-2401

CHUNG-HANG "CHRIS" PENG

21633 E. LAUREL COURT

WALNUT, CA 91789-1444

The SWPPM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. The SWPPM will be available at all times throughout the duration of the project. Duties of the SWPPM include but are not limited to:

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP, including but not limited to:
 - Implementation of prompt and effective erosion and sediment control measures
 - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Storm event inspections
- Post-storm inspections
- Routine inspections as specified in the project's specifications or described in the SWPPP
- Updates/Amendments to the SWPPP, as needed
- Preparing annual compliance certification for owner's, or owner's authorized representative, signature
- Ensuring elimination of all unauthorized discharges
- The SWPPM shall be assigned authority by the Contractor to mobilize crews in order to make immediate repairs to the control measures
- Coordinate with the Contractor to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

Section 400

References

The following documents are made a part of this SWPPP by reference:

- Project plans and specifications No. 20825 Gartel Drive, dated May 18, 2007, prepared by G.V.W. Engineering, Inc..
- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- California Stormwater BMP Handbook - Construction, January 2003
-
-

Section 500

Body of SWPPP

500.1 Objectives

This Storm Water Pollution Prevention Plan (SWPPP) has six main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and
- Identify non-storm water discharges, and
- Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).
- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into water bodies listed on Attachment 3 of the Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation).
- For all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

This SWPPP conforms with the required elements of the General Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permit or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

500.2 Vicinity Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9:

- Vehicle fluids, including oil, grease, petroleum and coolants.
- Vehicle batteries
- Asphaltic emulsions associated with asphalt-concrete paving operations.
- Cement materials associated with PCC concrete paving operations and drainage structures.
- Base and subbase material.
- Joint and curing compounds.
- Concrete curing compounds.
- Paints
- Solvents, thinners and acids.
- Sandblasting materials.
- Mortar mix.
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, mulch and pesticides).

- Treated lumber (materials and waste).
- PCC rubble.
- Masonry block rubble.
- General litter.
- Cleaning Products
- Adhesives
- Dust Palliative Products
- Soil Amendment/Stabilization Products

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clearing and grubbing operations.
- Grading operations
- Soil export operations
- Utility excavation operations.
- Sandblasting operations
- Landscaping operations
- Irrigation operations.
-

Attachment C lists all Best Management Practices (BMPs) that have been selected for implementation in this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a list, and/or copies of the fact sheets of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures encountered within the project site:

- There are no existing (pre-construction) control measures on the project site.
-
-
-
-
-

500.3.3 Nature of Fill Material and Existing Data Describing the Soil

DESCRIBE CONDITIONS OF FILL MATERIALS AND EXISTING SOILS AT THE PROJECT SITE

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- The site is vacant. There have been no known structures on the site.
- There are no known pollutants to contribute to the storm water.
- The southern one-quarter of the lot adjacent to the street will be developed. The slopes in this area ascend northeasterly on gradients of 2.8:1 to 3:1 (horizontal to vertical) for a total height of approximately 175 feet. There is a 10-foot-high road cut along the street that has a gradient of 1.5:1 and a 20- to 25-foot high west-facing slope along the westerly property line that has a gradient of 1.5:1. Total relief on the lot is approximately 183 feet. Runoff from the site slope is primarily by sheetflow to the street and to the lots on the south. The slope is covered with annual weeds and grasses. No evidence of shallow ground water, seepage or springs was observed anywhere on the site, including with the test pits.

- Inspection of the test pits as well as review of published geologic maps indicates that the lot is underlain by colluvial soil and bedrock of the Miocene age Puente Formation. Descriptions and distribution of these units are as follows:
- Colluvial Soil - The colluvial soil consists of moderately dense, brown, porous to very porous, slightly silty, fine sand. this unit is only one foot thick and rest on bedrock.
- Bedrock - The bedrock beneath the site consists of slightly to moderately hard, light brown to yellow-brown to gray-brown, well indurated, moderately thin to thin-bedded fine-grained sandstone and siltstone with some thin beds of tuff. Generally, the rock on the site is slightly to moderately fractured, moderately weathered and competent.
- Bedding is relatively uniformly oriented with north-northwesterly strikes and easterly dips of 23 to 35 degrees. This results in supported bedding over the entire site.
- No known faults cross or trend toward the site.
- There will be approximately 1,507 c.y. of import for the project. This fill material will be tested by the geotechnical engineer for compatability with the site soils and reviewed for past usage that may contribute pollutants to the stormwater.

500.3.4 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate erosion control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner. This project will implement the following practices for effective temporary and final erosion control during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary erosion control to remaining active and non-active areas as required by the California Stormwater BMPs Handbook - Construction, and the contract documents. Reapply as necessary to maintain effectiveness.

- 3) Implement temporary erosion control measures at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. Implement erosion control prior to the defined rainy season.
- 4) Stabilize non-active areas as soon as feasible after the cessation of construction activities.
- 5) Control erosion in concentrated flow paths by applying erosion control blankets, erosion control seeding, and lining swales as required in the contract documents.
- 6) Apply seed to areas deemed substantially complete by the Owner during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas.

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with Permit requirements and described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary erosion control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- EC-1, Scheduling
- EC-2, Preservation of Existing Vegetation
- EC-7, Geotextiles and Mats
- EC-9, Earth Dikes and Drainage Swales
-
-
-

Implementation of Erosion Control BMP's

- Disturbed areas that are substantially complete will be stabilized with permanent erosion control (soil stabilization) and vegetation (if within seeding window for seed establishment).
- Geotextiles blankets / mats will be used as necessary to provide stabilization of flowlines or swales.

500.3.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures required by the contract documents, and other measures selected by the Contractor, SWPPP Manager, or Owner.

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project, to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SE-1, Silt Fence
- SE-4, Fiber Rolls
- SE-6, Gravel Bag Berm
- SE-7, Street Sweeping and Vacuuming
- SE-8, Sandbag
- SE-10, Storm Drain Inlet Protection
-

Implementation of Temporary Sediment Controls

- Temporary sediment control BMP's will be deployed according to the schedule shown in SWPPP Section 300.4.
- During the rainy season, temporary sediment controls will be implemented at the draining of perimeter of disturbed soil areas, at the toe of slopes, at storm drain inlets and at outfall areas at all times.
- During the non-rainy season, temporary sediment controls will be implemented at the draining of disturbed soil areas and at storm drain downstream from disturbed areas before rain events.
- As shown on the WPCDs, gravel bag barriers will be deployed along the toe of exterior slopes to filter stormwater runoff.
- Fiber rolls may be used in place of gravel bags along the toe of exterior slopes to filter stormwater runoff.
- Storm drain inlet protection will be used at all operational internal inlets to the storm drain system during the rainy season as shown on the WPCDs.
- During the non-rainy season, in the event of a predicted storm, the following temporary sediment control materials will be maintained on-site: silt fence material, sandbags for linear barriers and fiber rolls.

500.3.6 Tracking Control

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SE-7, Street Sweeping and Vacuuming
- TC-1, Stabilized Construction Entrance/Exit.
-

Road Cleaning BMPs-Street Sweeping and Vacuuming

- Road sweeping and vacuuming will occur during soil hauling and as necessary to keep street surfaces clear of soil and debris. Washing of sediment tracked onto streets into storm drains will not occur.

Stabilized Construction Entrance/Exit

- A stabilized construction entrance/exit will be constructed and maintained at each construction site entrances and exits as shown on the WPCDs.

- The site entrance/exit will be stabilized to reduce tracking of sediment as a result of construction traffic. The entrance will be designed and graded to prevent runoff from leaving the site. The entrance will be flared where it meets the existing road to provide an adequate turning radius. During dirt-hauling activities that extend over a one-week period a site entrance/exit will be installed to reduce tracking sediment.

500.3.7 Wind Erosion Control

The following BMPs have been selected to control dust from the construction site:

- WE-1, Wind Erosion Control
-
-

Dust Control

- Potable water will be applied to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction. The water will be applied using water trucks. As shown on the project schedule, project soil will be disturbed and exposed from approximately November 1, 2007 to February 11, 2008. Water applications will be concentrated during the summer and early fall months and especially during the grading and export process.
- MP WE-1, Wind Erosion Control and BMP NS-1, Water Conservation Practices, will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding. Water equipment will be repaired immediately.
- During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), dust control will be applied to disturbed areas, including haul roads, to adequately control wind erosion.
- Schedule construction activities to minimize exposed area (EC-1, Schedule).
- Quickly stabilize exposed soils using vegetation, mulching, spray-on adhesives and sprinkling.
- Stabilize access points prior to commencement of construction.
- Minimize the impact of dust by anticipating the direction of prevailing winds.

- Direct most construction traffic to stabilized roadways within project.
- At least one water truck or water hoses with dispersal nozzels with shutoff valves will be available at all times to apply water or dust palliative to the project.
- Provide covers for haul trucks transporting materials that contribute to dust.
- Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances.
- Stabilize inactive construction sites using vegetation or chemical stabilization methods.

500.3.8 Non-Storm Water Control

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-12, Concrete Curing
- NS-14, Concrete Finishing
- WM-08, Concrete Waste Management
-

Illicit Connection/Illegal Discharge Detection and Reporting

- The Contractor will implement BMP NS-6, Illicit Connection/Illegal Discharge Detection and Reporting throughout the duration of the project.

Paving Operation

- The project will include the placement of approximately 100 square feet of AC pavement and 6,000 square feet of concrete driveway and walks. Paving locations and adjacent storm drain inlets are shown on the WPCDs. Paving operations will generally be conducted in September as shown on the project schedule in Section 300.4. BMP NS-3, Paving and Grading Operations, will be implemented to prevent paving materials from being discharged off-site. Covers will be placed on each inlet adjacent to the paving operations. The covers will consist of scrap carpeting or geotextiles secured by sandbags. Following paving operations, the area will be swept, inlet covers removed and any paving materials removed from inlets.

Vehicle and Equipment Operations

- Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks, trailers, backhoes, forklifts, generators, compressors and traffic control equipment. BMPs NS-9, Vehicle and Equipment Fueling and NS-10, Vehicle and Equipment Maintenance will be utilized to prevent discharges of fuel and other vehicle fluids. Vehicle fueling and maintenance will only be performed in the area designated on the WPCDs. Except for concrete washout, which is addressed in Section 500.3.8, vehicle cleaning will not be performed on-site.
- Fuel trucks, each equipped with adsorbent spill clean-up materials, will be used for all on-site fueling. Drip pans will be used for all fueling operations. Fueling trucks will not be parked overnight on the site.

Concrete Saw-cutting

- BMP WM-08, Concrete Waste Management, will be implemented to contain and dispose of saw-cutting slurries. The slurry will be vacuumed and discharged to the concrete washout facility. Dried and cured concrete wastes will be disposed of off-site during concrete washout maintenance activities.

500.3.9 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management
- The Contractor will implement BMP NS-6, Illicit Connection/Illegal Discharge Detection and Reporting throughout the duration of the project.
-
-
-
-

500.3.10 Cost Breakdown for Water Pollution Control

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and included in Attachment O. The cost breakdown reflects the items of work, quantities and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection, and Repair

Inspections will be conducted as follows:

- Prior to a forecast storm

- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- at any other time(s) or intervals of time specified in the contract documents

Completed inspection checklists will be kept with the SWPPP.

A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- Vegetated swale (TC-30) will be maintained in detention basin.
- Outlet protection/velocity dissipation device at storm drain outlet.
- Landscaping of parkway, yards and slopes using efficient irrigation systems.
- Periodic maintenance by property owner.
- Chris Peng will be the responsible person for post-construction sampling, monitoring and reporting for the first year following project completion.
- The Owner/Contractor will distribute to employees and subcontractors the following public education program pamphlets:
 - The Ocean Begins in Your Backyard
 - Storm Water Pollution and the Solution
 - Storm Water Best Management Practices (BMPs) for:
 - General Construction and Site Supervision
 - Heavy Equipment and Earth Moving Activities

- Roadwork and Paving Activities
- Fresh Concrete and Mortar Application
- Painting
- Landscaping, Gardening and Pest Control
- Automotive Maintenance and Car Care
- Water Quality Regulations for Home improvement and Construction Projects
-

The pamphlets will be given to employees and subcontractors and posted at the project site. Copies of the pamphlets are included in Attachment N.

The pamphlets are available from the Los Angeles County Department of Public Works Environmental Programs Division at 1(888) CLEAN LA, (www.888cleanla.com), State Water Resources Control Board (www.swrcb.gov) and the City of Los Angeles Stormwater Program (www.lacity.org/san/wpd).

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained by property owner.

500.7 Training

Section 300.5 shows the name of the Contractor's Storm Water Pollution Prevention Manager (SWPPM). This person has received the following training:

- Seminar on SWPPP implementation.
- On-going formal training sessions will be selected from the following organizations:
- State Water Resources Control Board
- California Storm Water Quality Association

The training log showing formal and informal training of various Contractor personnel is shown in Attachment I.

Formal and informal training will include tailgate briefings that address the following topics:

- Erosion Control BMPs
- Wind Erosion Control BMPs
- Non Storm Water BMPs
- Sediment Control BMPs
- Tracking Control BMPs
- Waste Management and Pollution Control BMPs
- Storm Water Sampling
- Emergency Procedures Specific to Construction Site Storm Water Management

This SWPPP was prepared by Danny M. Pierce of G.V.W. Engineering, Inc., Registered Civil Engineer No. 24979. He has attended seminars on the preparation of SWPPPs presented by Los Angeles County Dept. of Public Works and a CASQA 6 hour seminar on SWPPPs and their implementation. His informal training includes instruction from State of California Regional Water Quality Control Board staff members and other Public Agency staff members. He has prepared several SWPPPs in Los Angeles, Riverside, San Bernardino and Orange Counties.

500.8 List of Subcontractors

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The subcontractor notification letter and log is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.

Section 600

Monitoring Program and Reports

600.1 Site Inspections

The SWPPM will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, and as specified in the contract documents. The results of all inspections and assessments will be documented. Copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: Chung-Hang "Chris" Peng Contact phone: (909) 896-2663

600.2 Non-Compliance Reporting

If a discharge occurs or if the project receives a written notice of non-compliance, the Contractor will immediately notify the Owner and will file a written report to the Owner within 7 days of the discharge or notice. The Owner is responsible for filing a written report to the Regional Water Quality Control Board (RWQCB) within 30 days or identification of non-compliance. Corrective measures will be implemented immediately following the discharge, notice or order. A sample Notice of Non-Compliance (NONC) form is provided in Attachment K. All discharges will be documented on a Discharge Reporting Log using the example form in Attachment T.

The report to the Owner and to the RWQCB will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and
- An implementation and maintenance schedule for any affected BMPs

600.3 Record Keeping and Reports

Records shall be retained for a minimum of three years for the following items:

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments

600.4 Sampling and Analysis Plan for Sediment

This project does not have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of Section B of the General Permit, including SWRCB Resolution 2001-046.

600.5.1 Scope of Monitoring Activities

The following construction materials, wastes or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- Vehicle fluids, including oil, grease, petroleum and coolants
- Asphaltic Emulsions associated with asphalt-concrete paving operations
- Dement materials associated with PCC concrete paving operations and drainage structures
- Base and subbase materials
- Joint and curing compounds
- Paints
- Solvents, thinners and acids
- Sandblasting materials

- Mortar mix
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, mulch and pesticides)
- Treated lumber (material and waste)
- PCC rubble
- Masonry block rubble
- General litter
- Clear and grub operations
- Grading operations
- Soil import operations
- Sandblasting operations
- Landscaping operations
- Irrigation operations

The following existing site features, as identified in Section 500.3.3, are potential sources of non-visible pollutants to storm water discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Attachment B.

- There are no known pollutants that may contribute to storm water discharges.
-
-

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the WPCDs in Attachment B.

- None
-

■

The project has the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project. Locations of such run-on to the project site are shown on the WPCDs in Attachment B.

■ None

■

■

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

600.5.2 Monitoring Strategy

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents storm water contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the

leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Permit. Planned sampling locations are shown on the WPCDs in Attachment B and include the following:

- No sampling locations have been identified for the collection of samples of runoff that drain areas where soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil will be applied.
- If applicable Sample location number(s) is located .
- No sampling locations have been identified for the collection of samples of runoff that drain areas contaminated by historical usage of the site.
- If applicable Sample location number(s) is located .
- Two sampling locations have been identified for the collection of samples of run-on to the project site with the potential to combine with discharges being sampled for non-visible pollutants. These samples are intended to identify sources of potential non-visible pollutants that originate off the project site.
- Sample location number(s) 1 is located at the northwest corner of the property at the drainage swale along Gartel Drive.

- Sample location number 2 is located at the southeast corner of the property at the drainage swale along Gartel Drive.
- A location has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location was selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soils areas.
- Sample location number(s) 3 is located in the drainage swale northeast of the construction site above all construction activity.

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

Samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number: Chung-Hang "Chris" Peng / (909) 896-2663

Name/Telephone Number:

Alternate(s)/Telephone

Number:

Alternate(s)/Telephone

Number:

Prior to the rainy season, all sampling personnel and alternates will review the SAP. Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not

come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by Contractor sampling personnel.

Safety practices for sample collection will be in accordance with the latest edition of the Contractor's Health and Safety Plan.

Samples on the project site will be collected by the following [specify laboratory or environmental consultant]:

Company Name: State Certified Laboratories can be found on the following
website: www.dhs.ca.gov/ps/ls/elap/lab-lists/elaplablist.xls

Address:

Telephone Number:

Point of Contact:

Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

SWPPM will contact [specify name of laboratory or environmental consultant] [enter number of hours] hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel, supplies and field test equipment for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

[Specify name of laboratory or environmental consultant] will obtain and maintain the field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by their sampling personnel.

600.5.4 Analytical Constituents

Identification of Non-Visible Pollutants

Table 600-2 lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

Table 600-2

Potential Non-Visible Pollutants and Water Quality Indicator Constituents

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Cleaning Products	Acids	pH Acidity Anions (acetic acid, phosphonic acid, sulfuric acid, nitric acid, hydrogen chloride)
	Bleaches	Residual Chlorine
	TSP	Phosphate
	Solvents	VOC & SVOC
	Masonry products	pH & Alkalinity
PCC Concrete Cement & Masonry Products	Sealant (Methyl Methacrylate-MMA)	Methyl Methacrylate Cobalt Zinc
	Incinerator Bottom Ash, Bottom Ash, Steel Slag, Foundry Sand, Fly Ash	Aluminium Calcium Vanadium Zinc
	Municipal Solid Waste	
	Non-Pigmented Curing Compounds	Acidity Alkalinity pH VOC & SVOC

Table 600-2

Potential Non-Visible Pollutants and Water Quality Indicator Constituents

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Landscaping and Other Products	Aluminum Sulfate	Aluminum, TDS & Sulfate
	Sulfur-Elemental	Sulfate
	Fertilizers- Inorganic	Nitrate, Phosphate, Organic Nitrogen & Potassium
	Fertilizers-Organic	TOC, Nitrate, Organic Nitrogen & COD
	Herbicide	Herbicide
	Pesticide	Pesticide
Painting Products	Lime Paint Strippers	Alkalinity & pH VOC & SVOC
	Resins	COD & SVOC
	Sealants	COD
	Solvents	COD, VOC & SVOC
	Lacquers, Varnish, Enamels & Turpentine	COD, VOC & SVOC
	Thinners	VOC & COD

Adhesives	Adhesives	COD, Phenols &SVOC
Dust Palliate Products	Salts (Magnesium, Chloride, Calcium Chloride and Natural Brines)	Chloride, TDS & Caions (Sodium, Mangesium & Calcium)
Vehicle	Batteries	Sulfuric Acid, Lead & pH
Soil Amendment/Stabilization Products	Polymer/ Copolymer	Organic Nitrogen, BOD, COD, DOC, Nitrate, Sulfate & Nickel
	Lignin Sulfonate	Alkalinity & TDS
	Psyllium	COD & TOC
	Guar/ Plant Gums	COD, TOC & Nickel
	Gypsum	pH, Calcium, Sulfate, Aluminum, Barium, Manganese & Vanadium
Treated Wood Products	Ammoniacal-Zinc-Arsenate(ACZA)	Arsenic, Total Chromium, Copper and Zinc
	Copper-Chromium-Arsenic(CCA)	Arsenic, Total Chromium, Copper and Zinc
	Ammoniacal-Copper-Arsenate(ACA)	Arsenic, Total Chromium, Copper and Zinc
	Copper Naphthenate	Arsenic, Total Chromium, Copper, and Zinc

600.5.5 Sample Collection and Handling

Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in the Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants," provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.

Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not sample near a running vehicle where exhaust fumes may impact the sample.

- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.
- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

A State Certified Laboratory will be selected from the the list on the following Website:

Laboratory Name:

www.dhs.ca.gov/ps/ls/elap/lab-lists/elaplablist.xls

Address:

Telephone Number:

Point of Contact:

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification number and location.
[Project Number]-[Six digit sample collection date]-[Location]
(Example: 0G5304-081801-Inlet472).
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation
(Example: 0G5304-081801-DUP1).
 - Collection date/time (No time applied to QA/QC samples)
 - Analysis constituent
- Sampling Activity Logs: A log of sampling events will identify:
 - Sampling date
 - Separate times for collected samples and QA/QC samples recorded to the nearest minute
 - Unique sample identification number and location
 - Analysis constituent
 - Names of sampling personnel
 - Weather conditions (including precipitation amount)
 - Field analysis results
 - Other pertinent data
- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" in this section.

Table 600-3

Notes:

For samples collected for field analysis, collection, analysis and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument(s) will be used to analyze the following constituents:

Field Instrument	Constituent

- The instrument(s) will be maintained in accordance with manufacturer's instructions.
- The instrument(s) will be calibrated before each sampling and analysis event.
- Maintenance and calibration records will be maintained with the SWPPP.

600.5.7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be included in the on-site SWPPP within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP.

600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, the water quality analytical results, and the QA/QC data, will be included in the on-site SWPPP.

Should the runoff/downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.